Perfecting Your iPhone Table Views

Session 101

These are confidential sessions—please refrain from streaming, blogging, or taking pictures.

Perfecting Your iPhone Table Views

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iPhone Frameworks Engineer

Prerequisites

- Working knowledge of UITableView and UITableViewCell

What You'll Learn

- Quick overview
- What's new
- Cell structure
- Cell design
- Gotchas

Overview

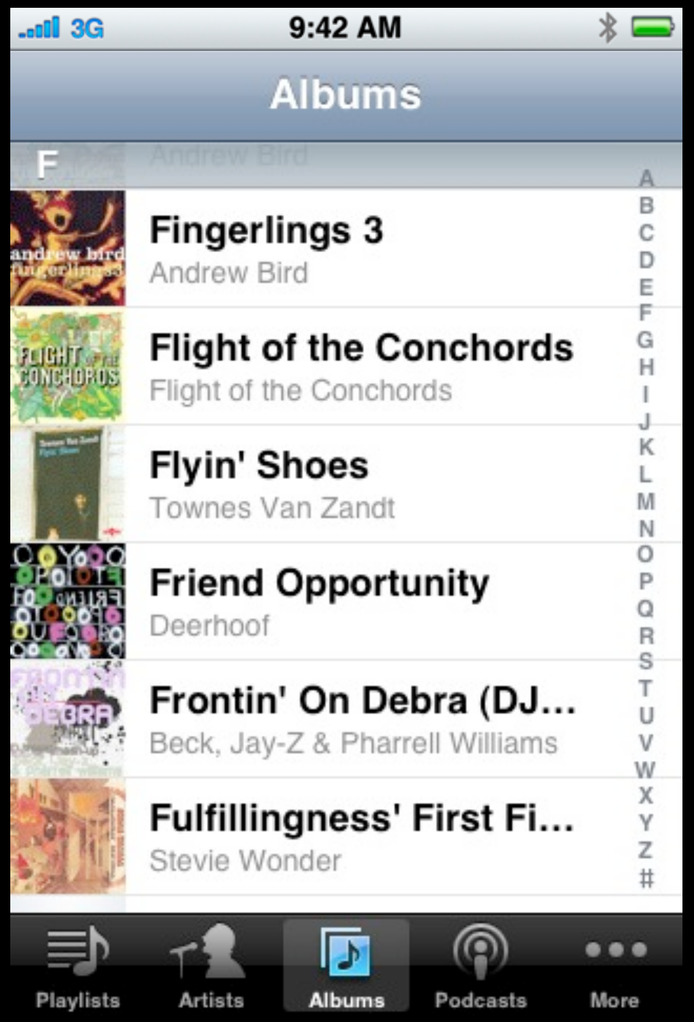
Table Views

- Display lists of content
  - Single column, multiple rows
  - Vertical scrolling
  - Large data sets
- Powerful and ubiquitous in iPhone applications

Table View Examples

Table View Styles

`UITableViewStylePlain`



`UITableViewStyleGrouped`

Table View Anatomy

Plain style

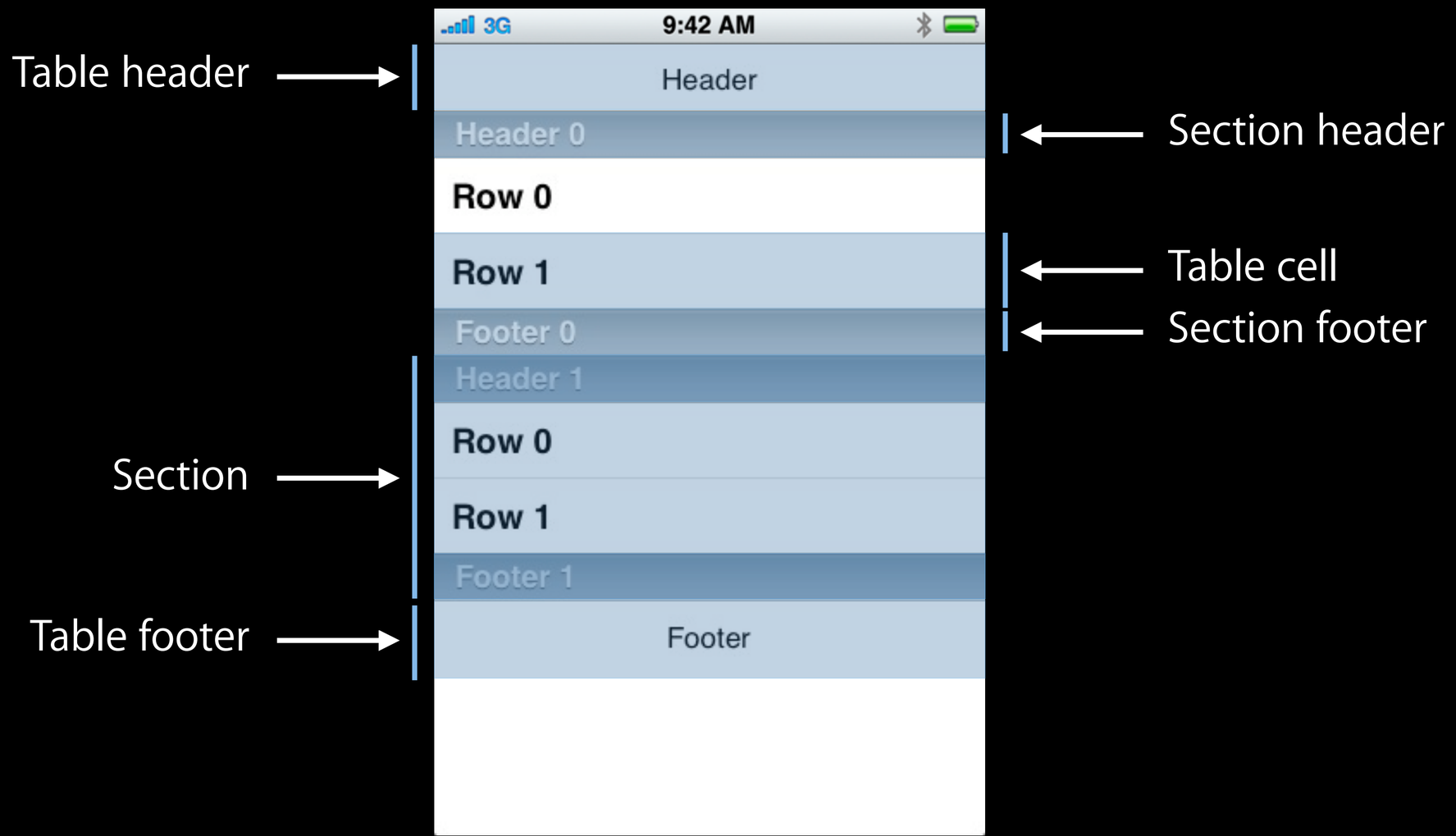


Table View Anatomy

Plain style

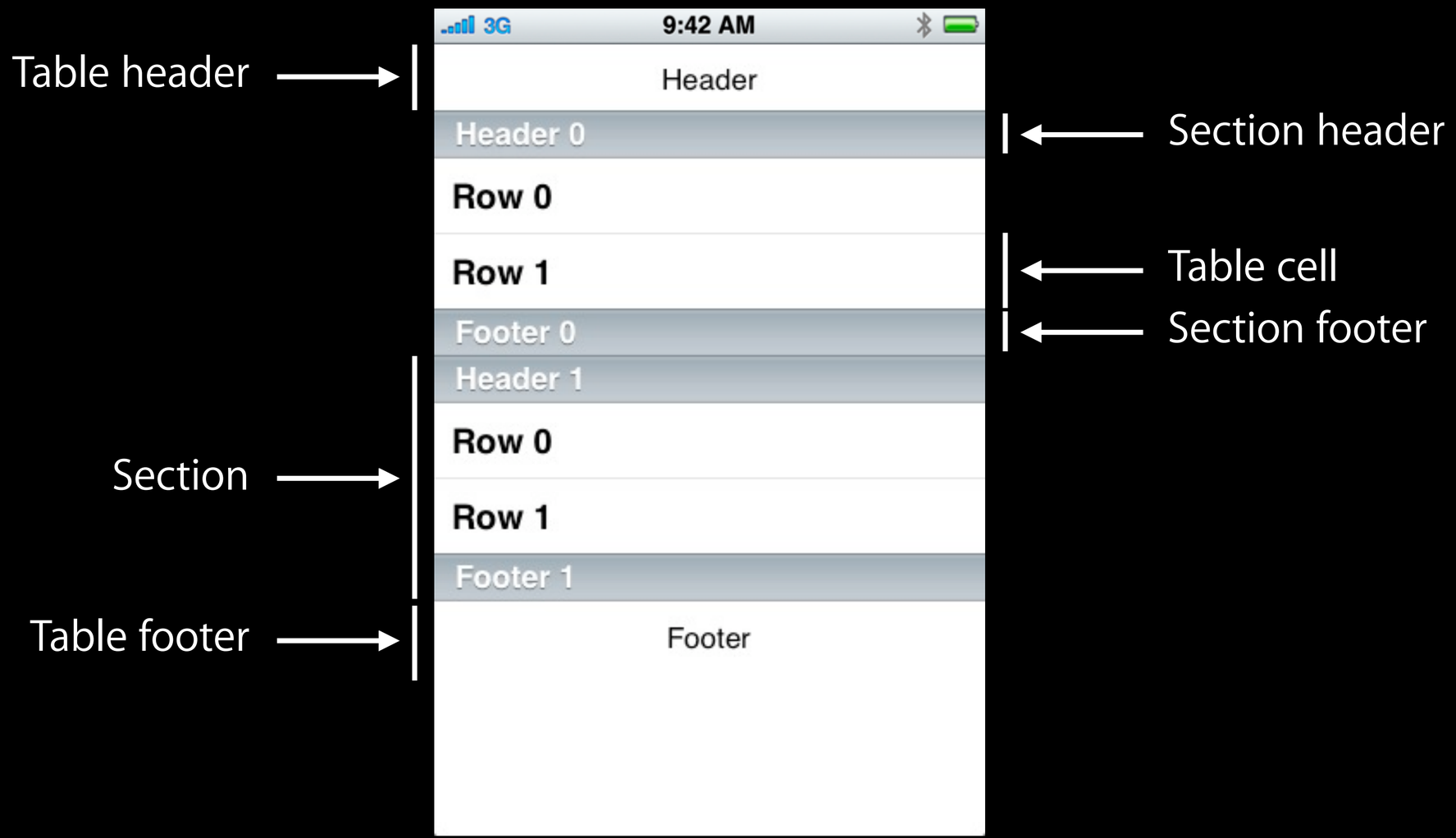
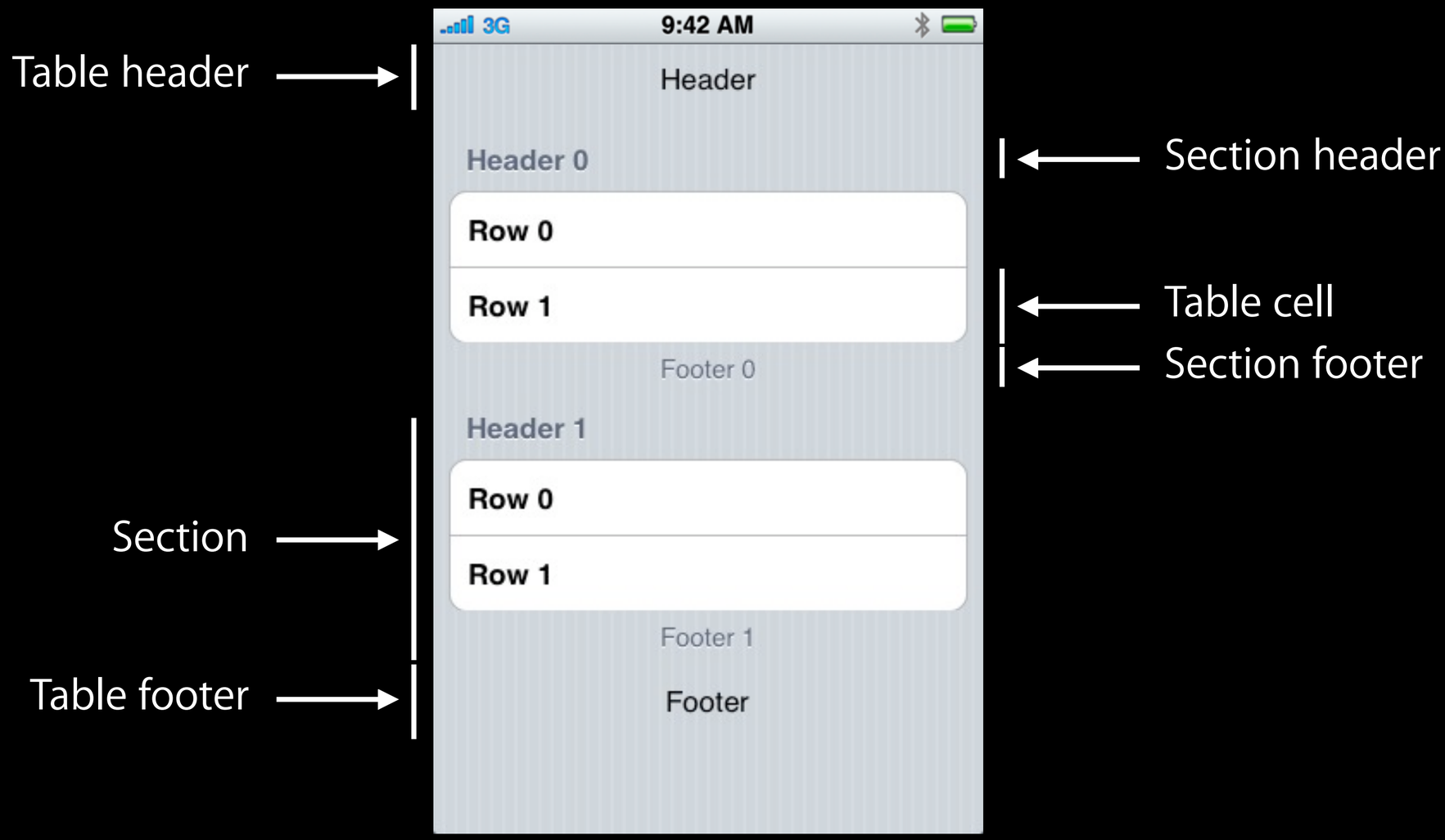


Table View Anatomy

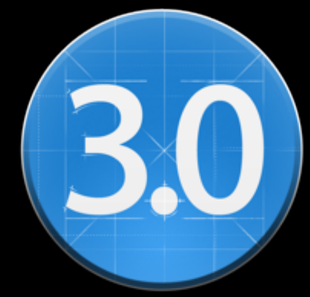
Grouped style



What's New

UITableView

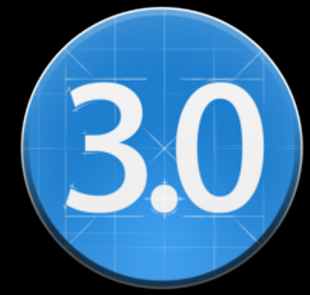
Section and Row Reloading

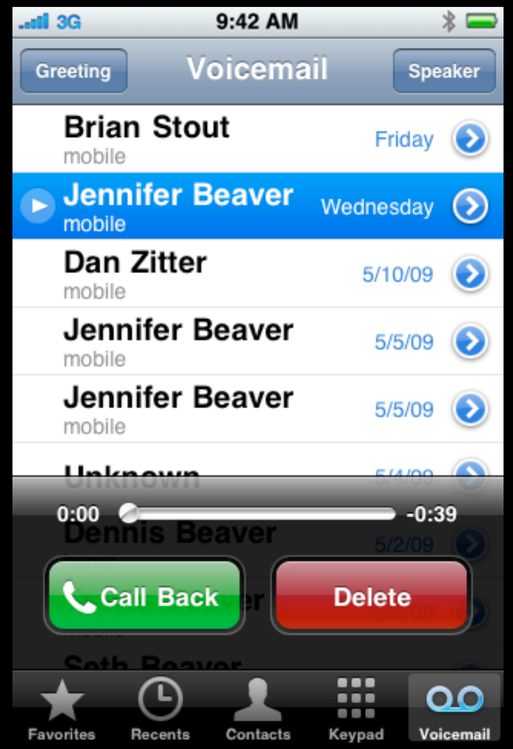


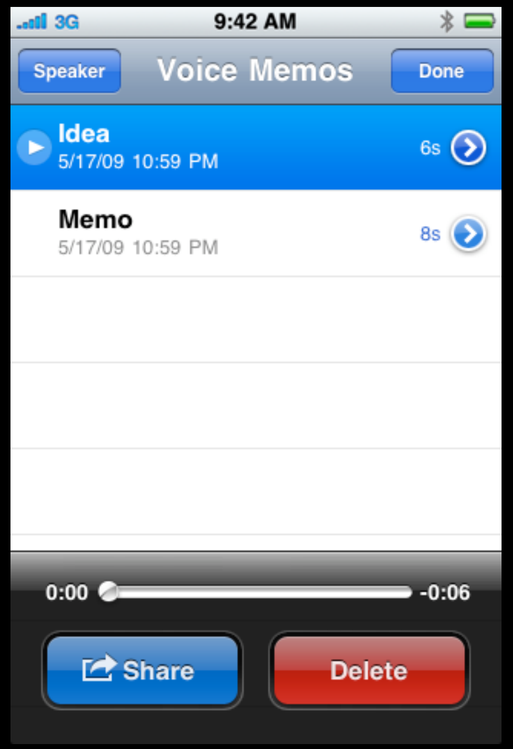

```
- (void)insertSections:(NSIndexSet *)sections
      withRowAnimation:(UITableViewRowAnimation)animation;
- (void)deleteSections:(NSIndexSet *)sections
      withRowAnimation:(UITableViewRowAnimation)animation;
- (void)reloadSections:(NSIndexSet *)sections
      withRowAnimation:(UITableViewRowAnimation)animation;
```

```
- (void)insertRowsAtIndexPaths:(NSArray *)indexPaths
      withRowAnimation:(UITableViewRowAnimation)animation;
- (void)deleteRowsAtIndexPaths:(NSArray *)indexPaths
      withRowAnimation:(UITableViewRowAnimation)animation;
- (void)reloadRowsAtIndexPaths:(NSArray *)indexPaths
                withRowAnimation:(UITableViewRowAnimation)animation;
```

Persistent Selection







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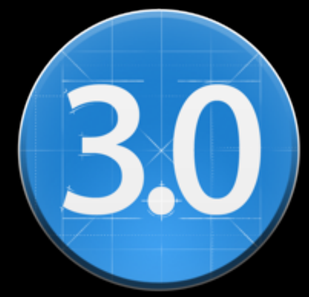

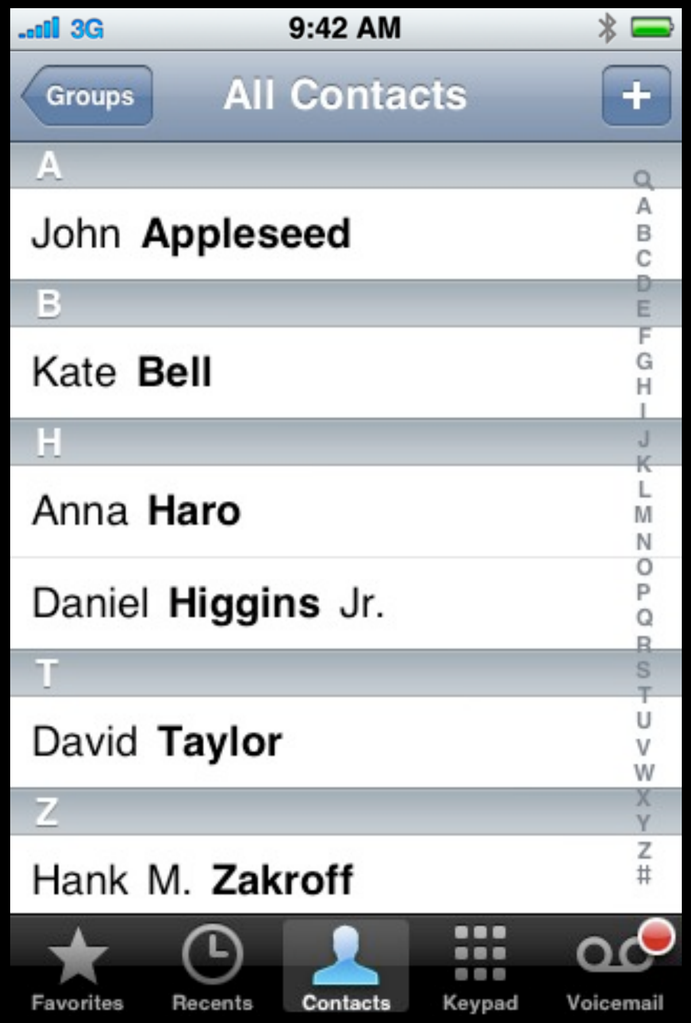

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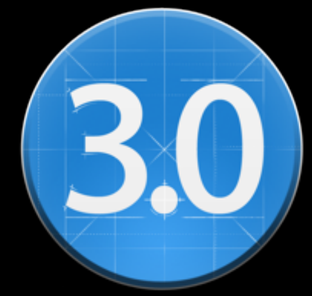

Daniel Higgins Jr.
Hank M. Zakroff
John Appleseed
David Taylor
Anna Haro
Kate Bell

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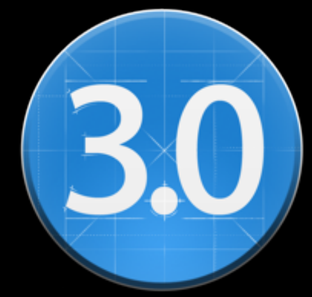

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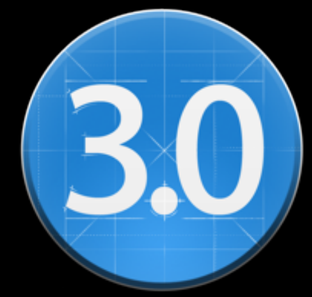

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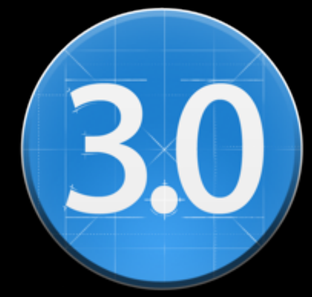

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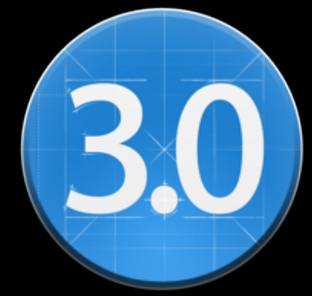

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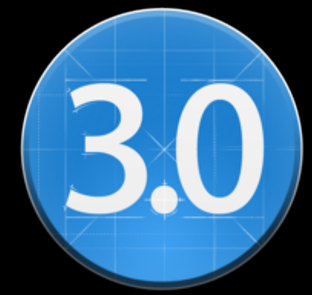

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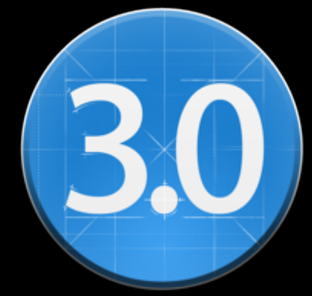

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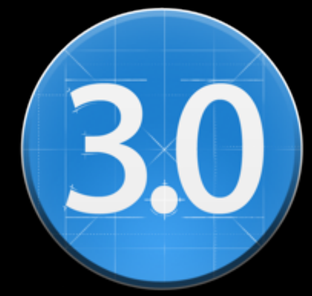

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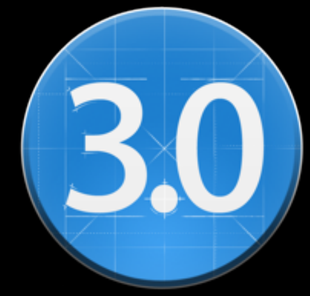
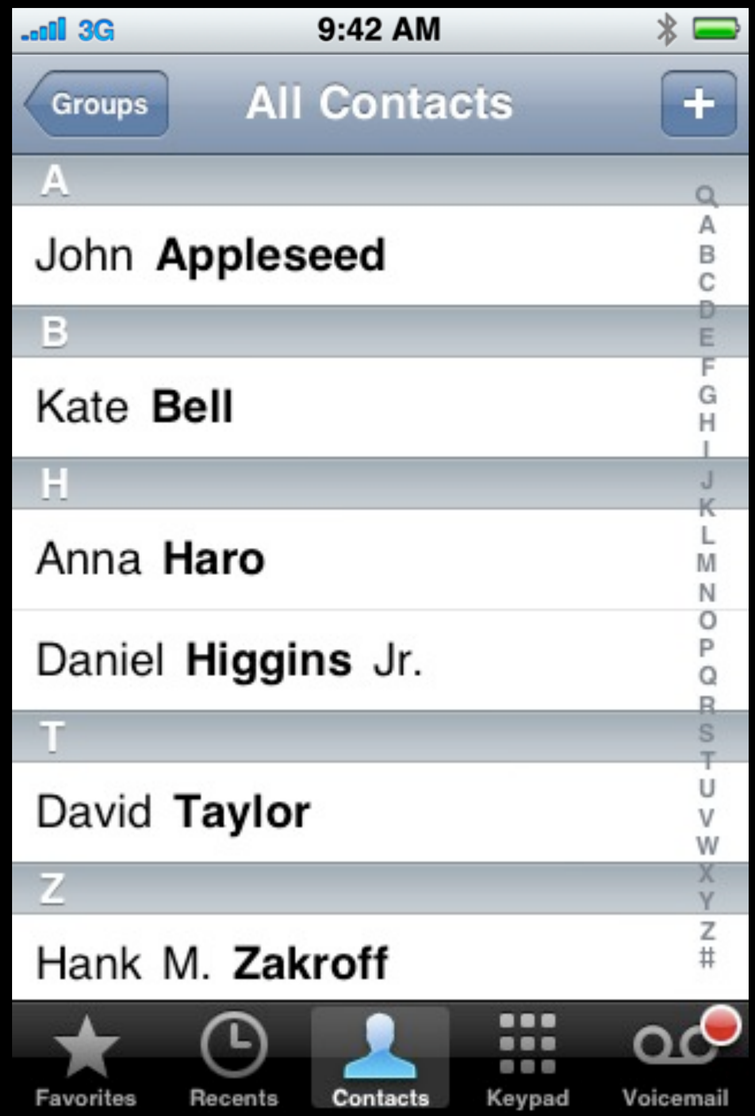




What's New

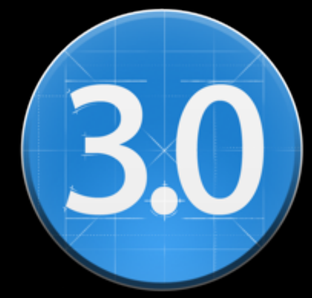
UITableViewCell

New Designated Initializer

```
- (id)initWithFra  GRect)frame
    reuseIdentifie  NSString *)reuseIdentifier;
```

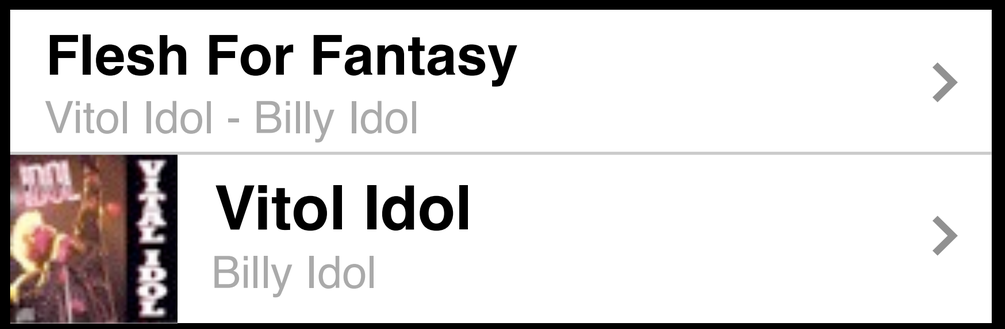
```
- (id)initWithStyle:(UITableViewCellStyle)style
    reuseIdentifier:(NSString *)reuseIdentifier;
```

Cell Styles



UITableViewCellStyleDefault

UITableViewCellStyleSubtitle



UITableViewCellStyleValue1

UITableViewCellStyleValue2

New Cell Properties

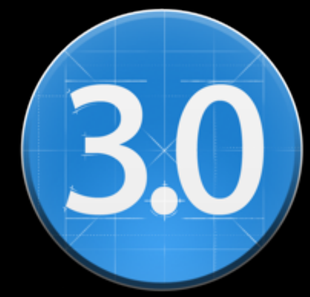
```
UIImage      ge;
UIImage *    ectedImage;
```

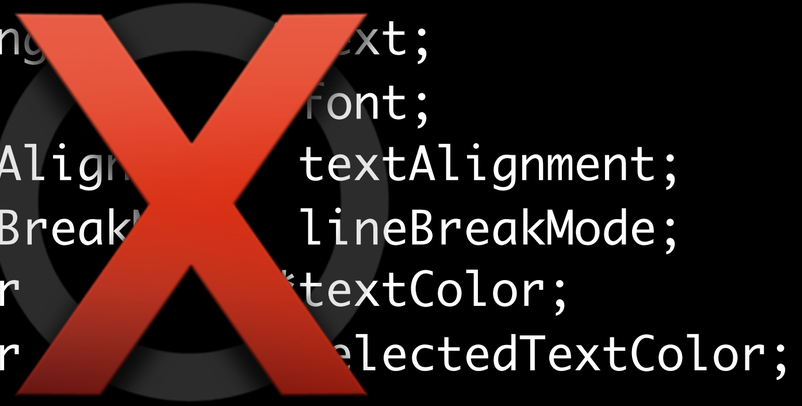
```
UIImageView *imageView;
```

```
cell.image = myImage;          → cell.imageView.image = myImage;

cell.selectedImage = myImage;  → cell.imageView.highlightedImage = myImage;
```

New Cell Properties

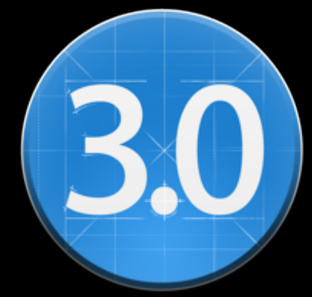





```
UILabel *textLabel;

            cell.text = myText;          cell.textLabel.text = myText;
            cell.font = myFont;          cell.textLabel.font = myFont;
                                ...
cell.selectedTextColor = myColor;        cell.textLabel.highlightedTextColor = myColor;
```

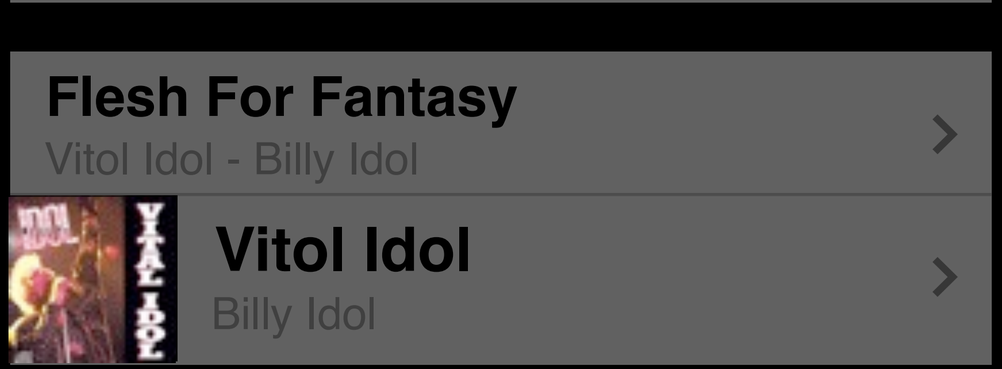
New Cell Properties




```
UIImageView *imageView;
```

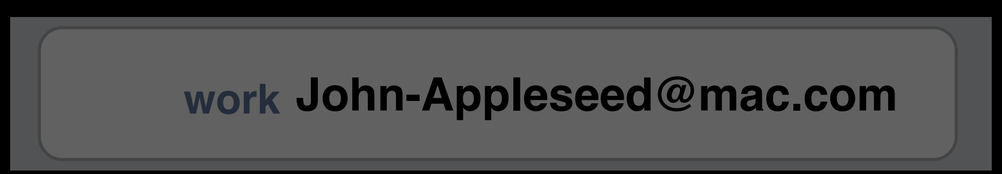
UITableViewCellStyleDefault

UITableViewCellStyleSubtitle

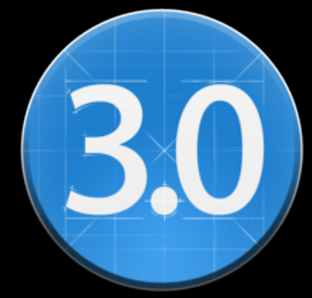


UITableViewCellStyleValue1

UITableViewCellStyleValue2



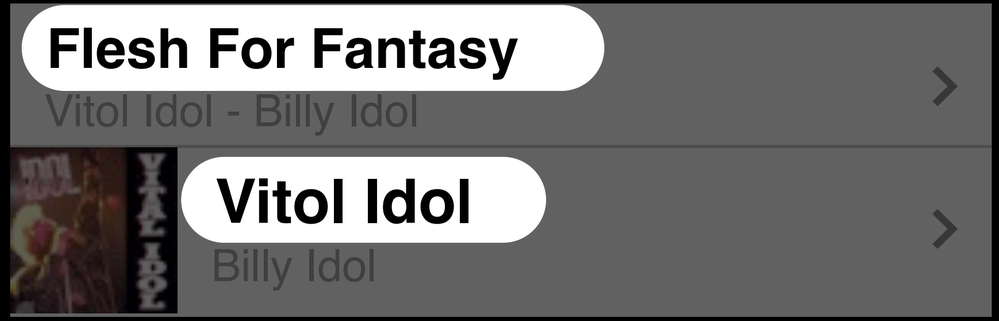
New Cell Properties




```
UIImageView *imageView;
UILabel *textLabel;
```

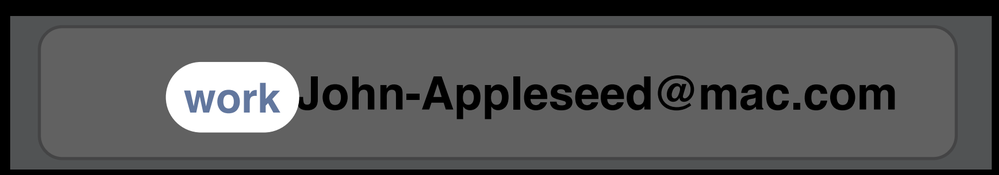
UITableViewCellStyleDefault

UITableViewCellStyleSubtitle

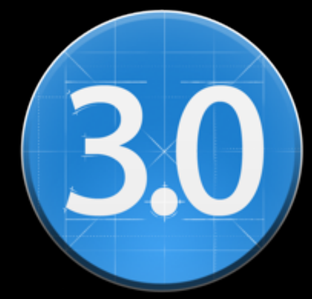


UITableViewCellStyleValue1

UITableViewCellStyleValue2



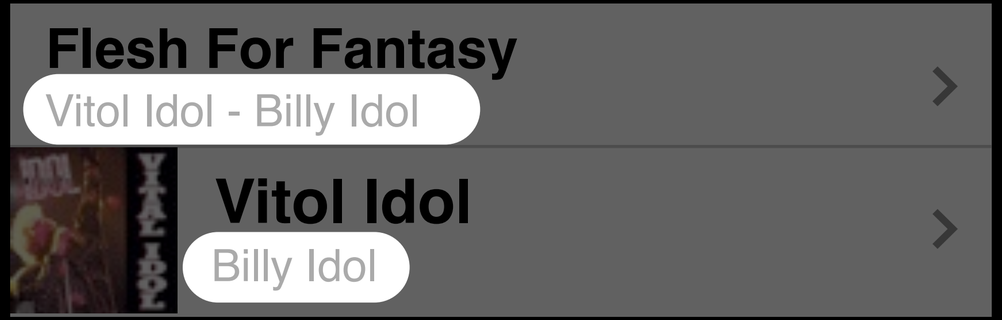
New Cell Properties




```
UIImageView *imageView;
UILabel *textLabel;
UILabel *detailTextLabel;
```

UITableViewCellStyleDefault

UITableViewCellStyleSubtitle

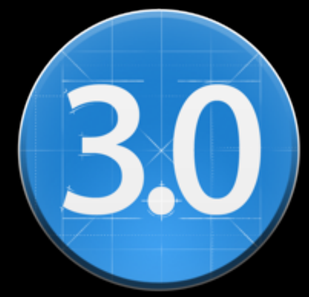


UITableViewCellStyleValue1

UITableViewCellStyleValue2

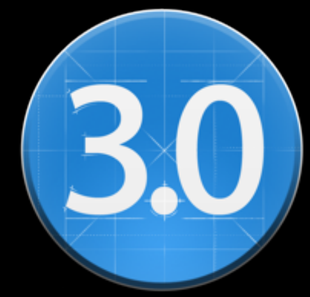
New Cell Properties

```
BOOL hidesAccessoryWhenEditing;
```

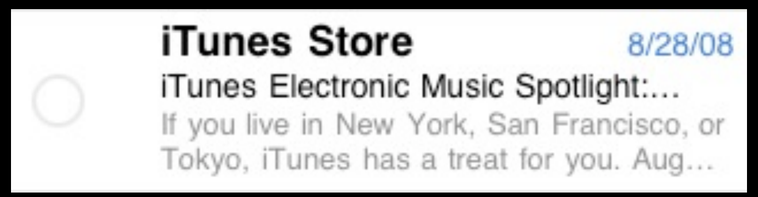


```
UITableViewCellAccessoryType  editingAccessoryType;
UIView                        *editingAccessoryView;
```

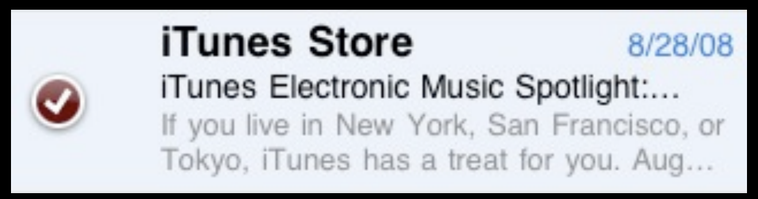
New Cell Properties



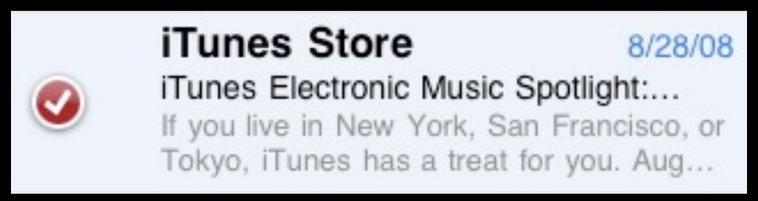

```
BOOL highlighted;
```



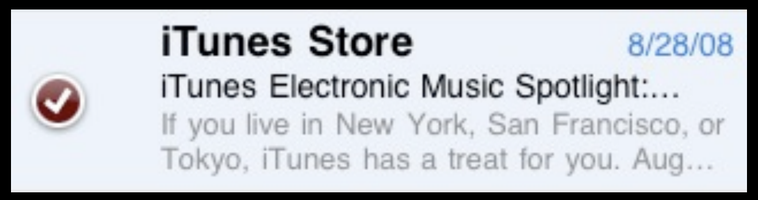

```
highlighted = NO
selected    = NO
```




```
highlighted = YES
selected    = NO
```

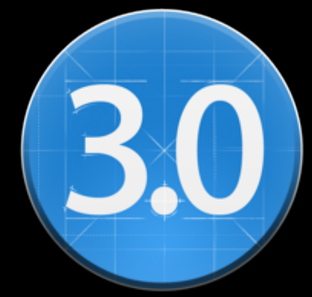


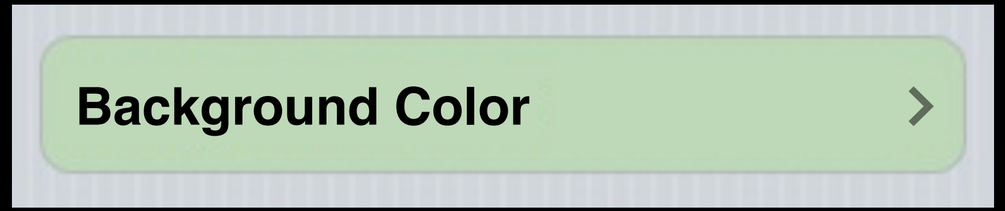

```
highlighted = NO
selected    = YES
```




```
highlighted = YES
selected    = YES
```

Background Color

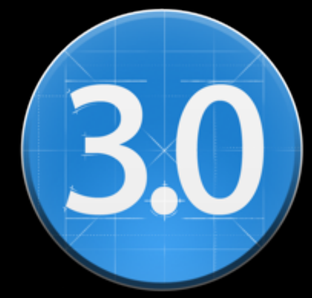




What's New

UITableViewController

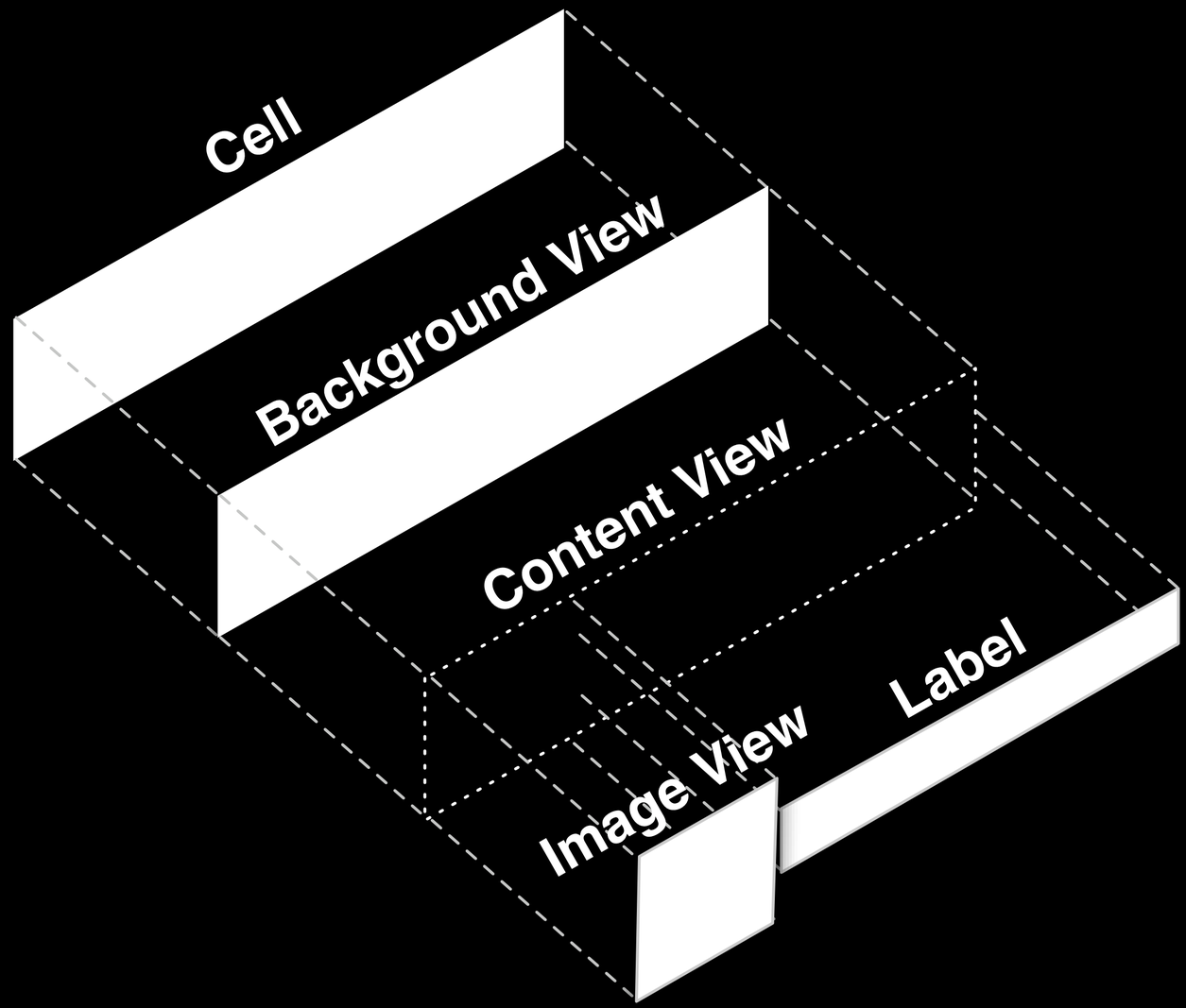
UITableViewController



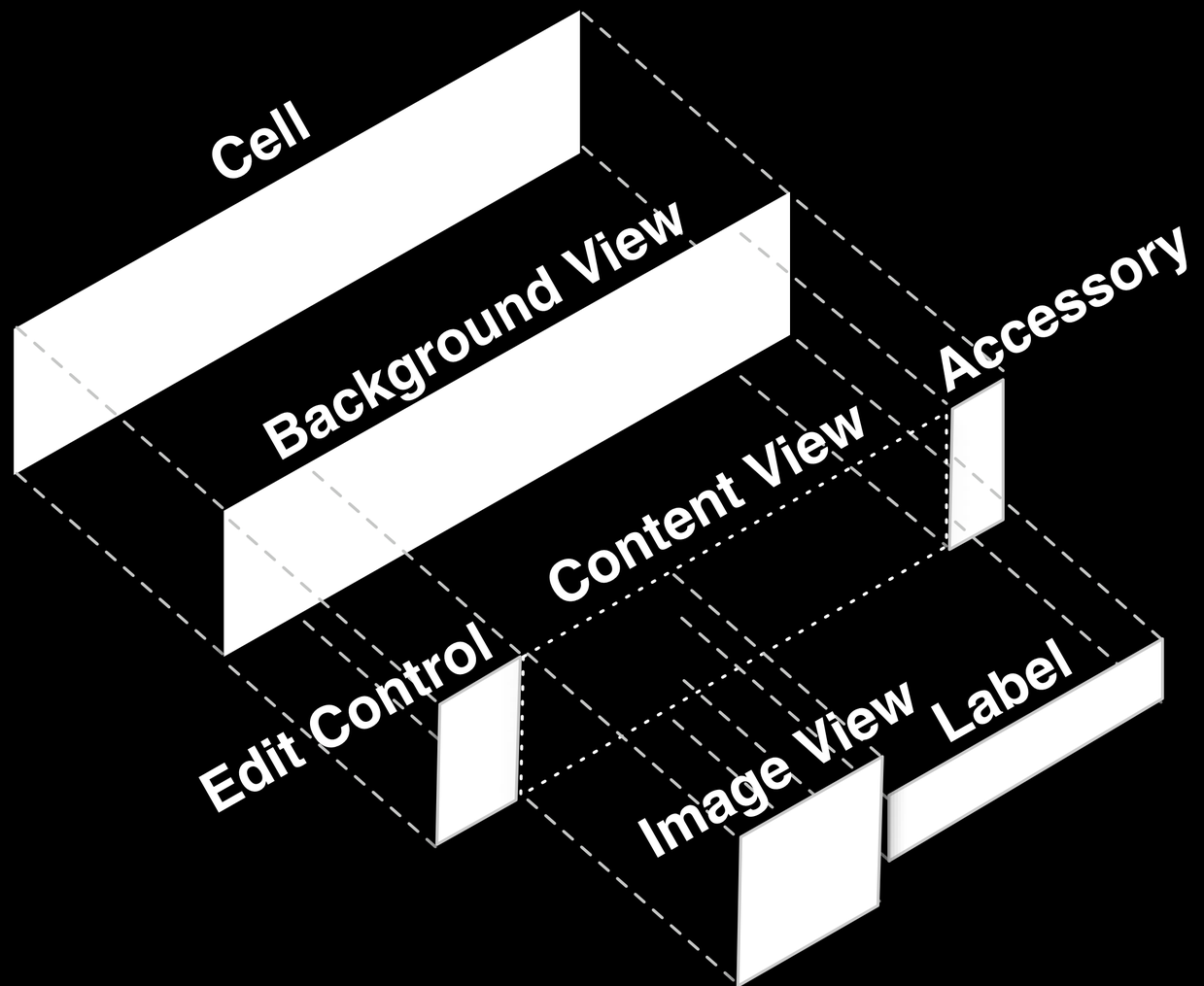
- Support for inline text editing
- NSFetchedResultsController
  - Please refer to the Core Data Programming Guide
  - Look at the CoreDataBooks sample

Cell Structure

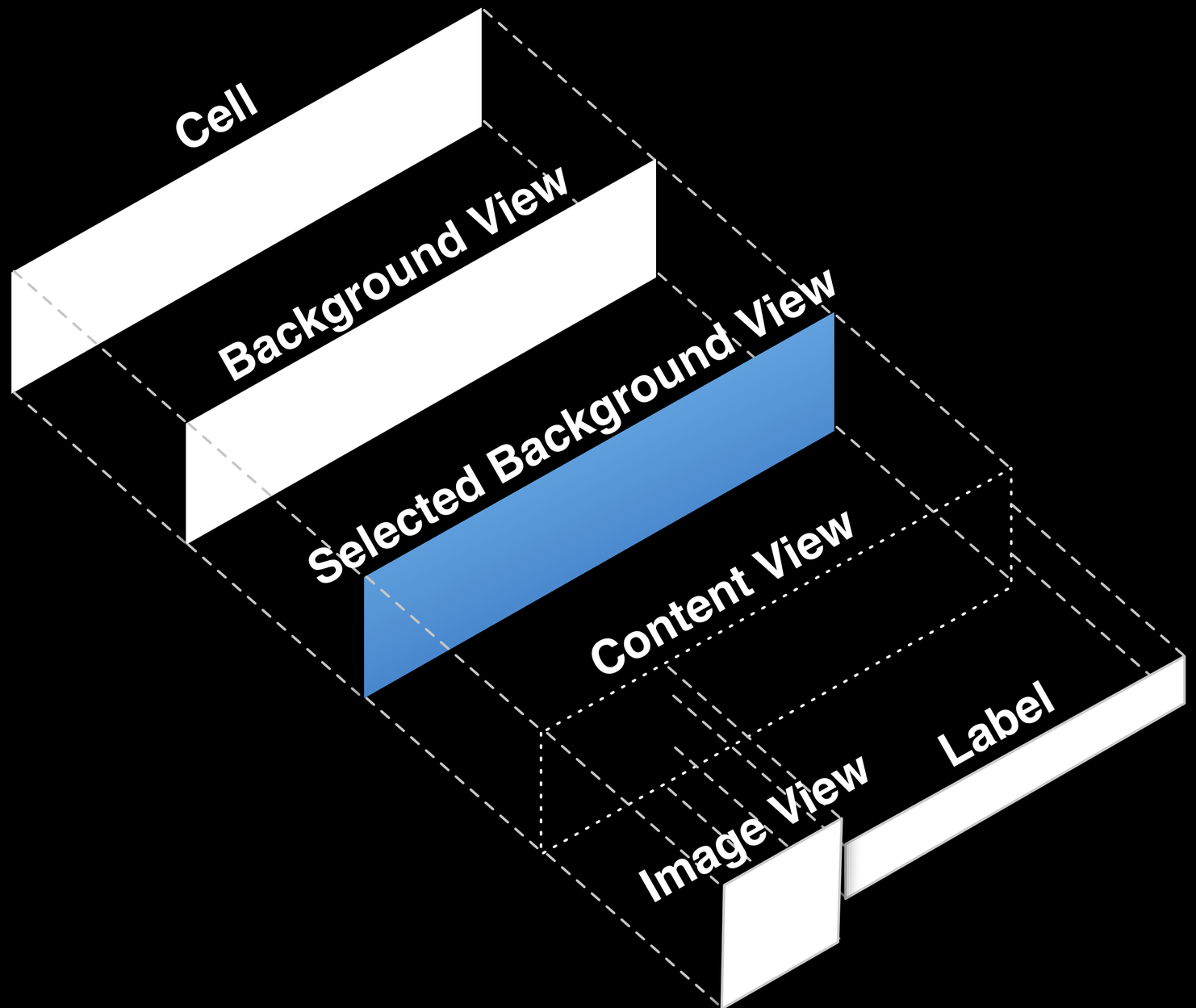
Cell Structure



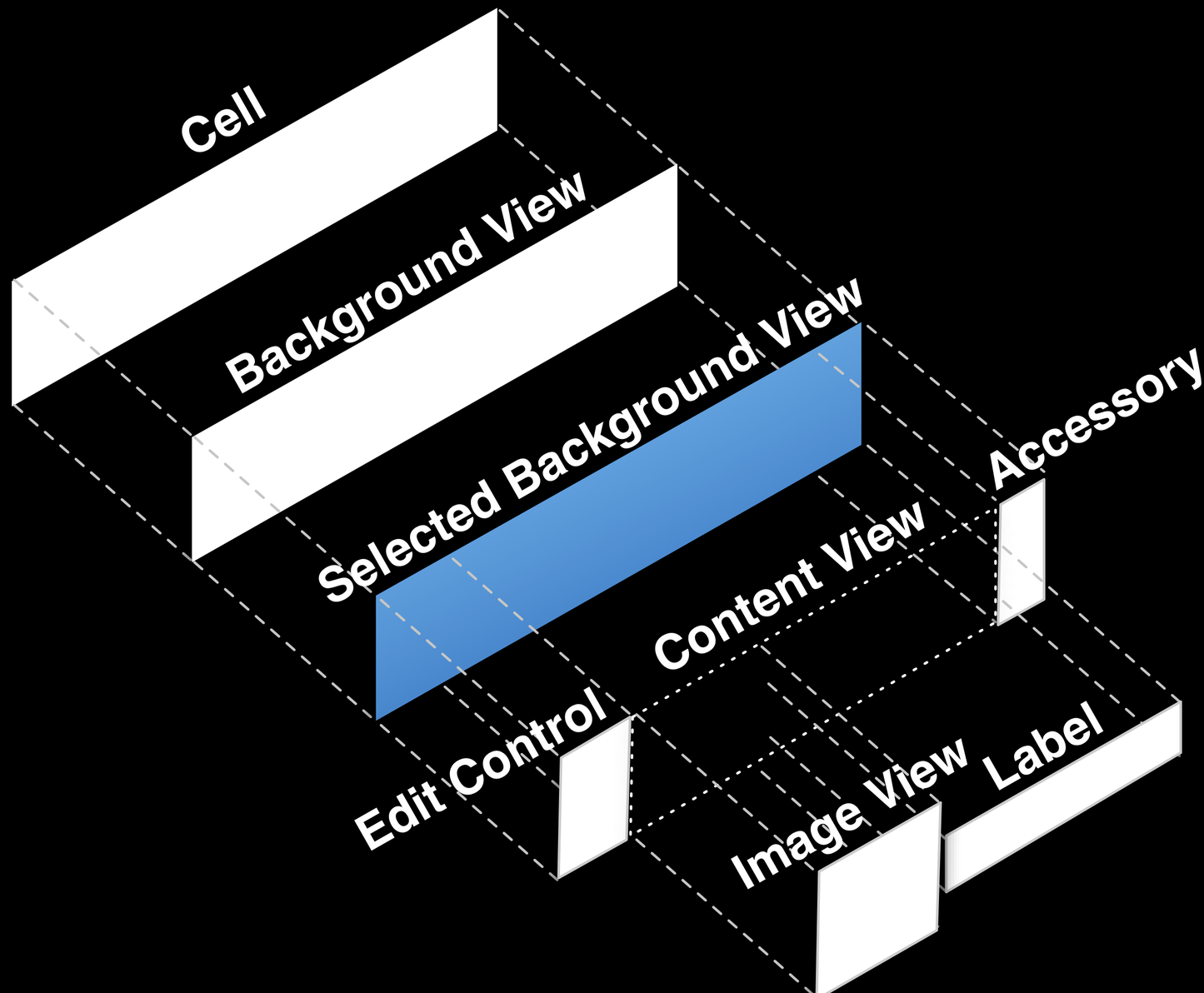
Cell Structure



Cell Structure



Cell Structure



Highlighting and Selection

Selection

- Save
  - highlighted
  - opaque
  - backgroundColor
- Set
  - highlighted = YES
  - opaque = NO
  - backgroundColor = clear

Deselection (animated)

- Start fade out of selectedBackgroundView
- At animation halfway point, reset
  - highlighted
- At end of animation, reset
  - opaque
  - backgroundColor

Highlighting and Selection

Highlighting and Selection

Highlighting and Selection

Highlighting and Selection

Highlighting and Selection

Highlighting and Selection

Highlighting and Selection

Cell Design

Cell Design

	Adding Subviews	Subclassing
Adding Individual Subviews	?	?
Adding Composite Subview	?	?

Cell Design

Individual subviews

Cell Design

Individual subviews

Cell Design

Composite subview

Cell Design

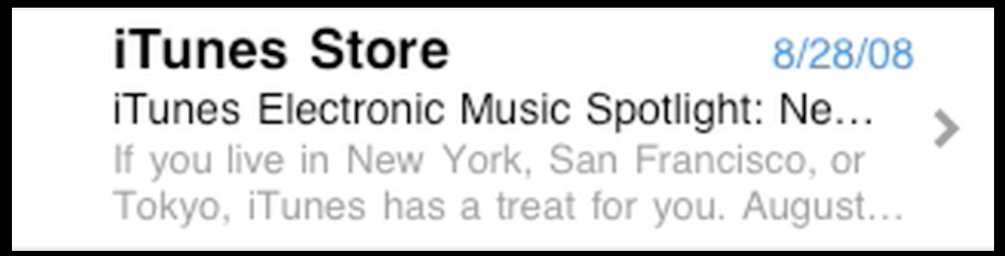
Composite subview

Cell Design

Hybrid approach

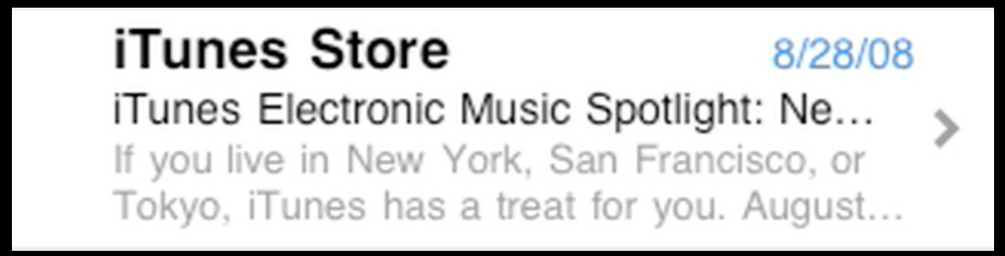
Cell Design

Hybrid approach



Cell Design

Hybrid approach



Demo

3G
9:42 AM
App Store Demo
Foo
Baseball
$2.98
106 Ratings
Foo
Blocks
$0.99
114 Ratings
Foo
Checkers
Free
87 Ratings
Foo
Dinner
$4.98
254 Ratings
Foo
Football
$1.99
422 Ratings
20 30
Foo
MathGraph
$0.99

Demo

Gotchas

Gotchas

- Calling `beginUpdates` without a matching call to `endUpdates`
- Using the cell's `highlighted/selected` state to determine how to draw your custom subviews
- Placing views outside their superview's bounds
- Thinking views need to be transparent
- Trying to set certain cell parameters in `tableView:cellForRowAtIndexPath:` instead of `tableView:willDisplayCell:forRowAtIndexPath:`
- Not reusing cells
- Reloading cells or the entire table instead of changing cell contents

More Information

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Documentation
Table View Programming Guide for iPhone OS
http://developer.apple.com/iphone/library/documentation/UserExperience/Conceptual/TableView_iPhone/

Related Sessions

Introduction to Core Data on iPhone	Marina Tuesday 5:00PM
Mastering iPhone Scroll Views	Pacific Heights Wednesday 2:00PM
iPhone View Controllers Techniques	Presidio Thursday 5:00PM

Labs

iPhone Table Views and Scroll Views Lab	iPhone Lab D Wednesday 3:30PM
iPhone Table Views and Scroll Views Lab	iPhone Lab D Thursday 2:00PM

Q&A

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